

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for identifying a candidate compound for treating a neoplasia, said method comprising the steps of:

(a) contacting a *C. elegans* vulval precursor cell comprising a nucleic acid sequence containing a loss of function mutation, wherein said nucleic acid sequence containing said loss of function mutation has having at least 95% sequence identity to SEQ ID NO: 24, ~~wherein said nucleic acid sequence comprises a loss of function mutation~~ and said cell comprises a second loss of function mutation in a Class A synthetic multivulval gene with a candidate compound;

(b) detecting cell proliferation in said contacted cell and

(c) comparing said cell proliferation in said contacted cell to cell proliferation in a control cell, wherein said control cell is not contacted with said candidate compound,

wherein a decrease in cell proliferation in said contacted cell relative to [[a]] said control cell identifies a candidate compound for treating a neoplasia.

2. (Original) The method of claim 1, wherein said cell is in a nematode.

3. - 21. (Cancelled)

22. (Currently Amended) The method of claim 1, wherein the Class A synthetic multivulval gene is *lin-15A* ~~or *lin-38*~~.

23. (Currently Amended) A method for identifying a candidate compound for treating a neoplasia, said method comprising the steps of:

(a) contacting a *C. elegans* vulval precursor cell comprising a nucleic acid sequence containing a loss of function mutation, wherein said nucleic acid sequence

containing said loss of function mutation has having at least 95% sequence identity to SEQ ID NO: 26, ~~wherein said nucleic acid sequence comprises a loss of function mutation~~ and said cell comprises a second loss of function mutation in a Class A synthetic multivulval gene with a candidate compound;

(b) detecting cell proliferation in said contacted cell; and

(c) comparing said cell proliferation in said contacted cell to cell proliferation in a control cell, wherein said control cell is not contacted with said candidate compound, wherein a decrease in cell proliferation in said contacted cell relative to [[a]] said control cell identifies a candidate compound for treating a neoplasia.

24. (Currently Amended) The method of claim 23, wherein the Class A synthetic multivulval gene is *lin-15A* ~~or *lin-38*~~.

25. (Previously Presented) The method of claim 23, wherein said cell is in a nematode.

26. (Cancelled)

27. (Currently Amended) A method for identifying a candidate compound for treating a neoplasia, said method comprising the steps of:

(a) contacting a *C. elegans* vulval precursor cell comprising a nucleic acid sequence containing a loss of function mutation, wherein said nucleic acid sequence containing said loss of function mutation has having at least 95% sequence identity to SEQ ID NO: 28, ~~wherein said nucleic acid sequence comprises a loss of function mutation~~ and said cell comprises a second loss of function mutation in a Class A synthetic multivulval gene, with a candidate compound;

(b) detecting cell proliferation in said contacted cell; and
(c) comparing said cell proliferation in said contacted cell to cell proliferation in a control cell, wherein said control cell is not contacted with said candidate compound, wherein a decrease in cell proliferation in said contacted cell relative to [[a]] said control cell identifies a candidate compound for treating a neoplasia.

28. (Currently Amended) The method of claim 27, wherein the Class A synthetic multivulval gene is *lin-15A* or *lin-38*.

29. (Previously Presented) The method of claim 27, wherein said cell is in a nematode.

30. (Cancelled)

31. (Currently Amended) A method for identifying a candidate compound for treating a neoplasia, said method comprising the steps of:

(a) contacting a *C. elegans* vulval precursor cell comprising a nucleic acid sequence containing a loss of function mutation, wherein said nucleic acid containing said loss of function mutation has having at least 95% sequence identity to SEQ ID NO: 2, ~~wherein said nucleic acid sequence comprises a loss of function mutation~~ and said cell comprises a second loss of function mutation in a Class A synthetic multivulval gene with a candidate compound;

(b) detecting cell proliferation in said contacted cell; and
(c) comparing said cell proliferation in said contacted cell to cell proliferation in a control cell, wherein said control cell is not contacted with said candidate compound,

wherein a decrease in cell proliferation in said contacted cell relative to [[a]] said control cell identifies a candidate compound for treating a neoplasia.

32. (Currently Amended) The method of claim 31, wherein the Class A synthetic multivulval gene is *lin-15A* ~~or *lin-38*~~.

33. (Previously Presented) The method of claim 31, wherein said cell is in a nematode.

34. (Cancelled)

35. (New) The method of claim 1, wherein the Class A synthetic multivulval gene is *lin-38*.

36. (New) The method of claim 23, wherein the Class A synthetic multivulval gene is *lin-38*.

37. (New) The method of claim 27, wherein the Class A synthetic multivulval gene is *lin-38*.

38. (New) The method of claim 31, wherein the Class A synthetic multivulval gene is *lin-38*.